

RESPONSE TO NON-FINAL OFFICE ACTION DATED
1/31/2005

REMARKS

Herein, the "Action" or "Office Action" refers to the Office Action identified in the above-identified title.

Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 9-15, 26-27, 31, 34 and 37-43 are presently pending. Claims amended herein are none. Claims withdrawn or cancelled herein are none. New claims added herein are 38-43.

In its previous response (dated 11/17/04) to a restriction requirement, Applicant elected claims 9-15, 26-27, 31, 34 and 37 without traverse.

Telephone Interview

The undersigned Attorney (Kasey Christie) for the Applicant greatly appreciates Examiner El Chanti granting a telephone interview today (6/20/2005). The interview consisted primarily of a discussion about different views about what the primary reference (Esaki) discloses.

While many points were raised and discussed, a key point raised was whether Esaki's dummy packets *cause* a transmission delay. In particular, the discussion focused on col. 3, lines 48-50 of Esaki, which says: "As a result of the dummy packet generation, data packet contentions occur on the communications line..." Applicant indicated that if a "contention" is a "transmission delay," then Esaki states here that its dummy packets cause a transmission delay.

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1 However, the claim language (e.g., from claim 9) states: "...sending at
2 least one 'push' packet to avert a transmission delay..." Unlike Esaki's dummy
3 packets, the claimed push packets avert a delay rather than cause it.

4 5 **SUBSTANTIVE CLAIM REJECTIONS**

6 **Claim Rejections under §§ 102 and 103**

7 The Office rejects all pending claims under §102 and/or §103. For the
8 reasons set forth below, the Office has not shown that the cited reference(s)
9 anticipate (i.e., §102) the rejected claims. For the reasons set forth below, the
10 Office has not made out a *prima facie* case of obviousness (i.e., §103).
11 Accordingly, Applicant respectfully requests that the rejections be withdrawn and
12 the case be passed along to issuance.

13 The Office's rejections are based upon one or more of the following
14 references:

- 15 • **Esaki:** *Esaki et al.*, US Patent No. 6,643,259 (issued: 7/21/1992 &
16 filed: 9/12/1990);
- 17 • **Computer Dictionary:** Microsoft Computer Dictionary, 5th Edition
18 (2002);
- 19 • **Gunningberg:** *Gunningberg et al.*, "How a Large ATM MTU
20 Causes Deadlocks in TCP Data Transfers", IEEE/ACM Transactions
21 on Networking, Vol. 3, Issues 4, (1995).

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Esaki

Esaki discloses a packet communication exchanging apparatus for transferring data packets across a common communication channel (i.e., bus or trunk). One or more output modules receive the incoming packets from one or more input modules. When it receives incoming data packets from the input modules via the trunk, an output module temporarily stores the packets in a buffer.

To prevent an overflow of the buffer, **Esaki** discloses an approach to stop or slow down the sending of incoming data packets. Since the sending input module cannot send a data packet when the trunk is "in use," **Esaki's** approach is to interfere with the transmission of additional data packets when there is a threat of the output module's buffer overflowing.

To do this, the output module sends a "dummy packet" over the trunk when the amount of the data packets in the buffer reaches one or more predetermined threshold values. The sole purpose of the dummy packet is to cause "contention" on the trunk and therefore, prevents (at least temporarily) the input module's ability to send more data packets.

Anticipation Rejections**Based upon Esaki**

The Office rejects claims 9-15, 26-27, 31, 34, and 37 under USC § 102(b) as being anticipated by **Esaki**. Applicant respectfully traverses the rejections of these claims. Based on the reasons given below, Applicant asks the Office to withdraw its rejection of these claims.

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Claims 9, 31, and 34

Claim 9, for example, recites:

- sending a set of packets from a sending entity to a receiving entity, wherein a transmission delay between packets in the set is intolerable;
- immediately thereafter, sending at least one "push" packet to avert a transmission delay between packets in the set, wherein the delay is caused by packet buffering of a communication device on the network.

In its rejection, Office indicates the following:

Esaki teaches the method explicitly as claimed including temporarily storing the data packets sent from the input modules and for generating and sending a dummy packet to the communication channel when the amount of the data packets temporarily stored therein exceeds a predetermined threshold value (see abstract).

As to claims 9, 31 and 34, Esaki teaches a method, computer readable medium and apparatus for facilitating speedy communication of packets between entities on a network, the method comprising:

• sending a set of packets from a sending entity to a receiving entity, wherein a transmission delay between packets in the set is intolerable (see col. 3 lines 30-41, packets are sent to input modules where contention is being monitored);

• immediately thereafter, sending at least one "push" packet to avert a transmission delay between packets in the set, wherein the delay is caused by packet buffering of a communication device on the network (see col. 3 lines 40-55, when a possible contention is detected, a dummy "push" packet is transmitted).

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Applicant submits that the Esaki does not disclose all of the recited features/elements arranged in the manner recited in these claims.

In particular, Esaki does not disclose:

- “a transmission delay between packets in the set is intolerable” and
- “...sending at least one ‘push’ packet to avert a transmission delay...”

Intolerable Transmission Delay

Esaki never even measures any transmission delay between packets. Without taking such a measurement, Applicant submits that Esaki cannot make a determination whether such a delay would be “intolerable.” Therefore, Applicant submits that Esaki does not disclose “a transmission delay between packets in the set is intolerable,” as recited in these claims.

Push Packet to Avert a Transmission Delay

The Office equates the “dummy packets” of Esaki with the “push” packets recited in this claim. The recited push packet is sent in order to “avert a transmission delay.” However, the dummy packets do the opposite. Applicant submits that dummy packets *cause* transmission delays rather than *avert* them. See col. 3, lines 48-50.

As shown above, Esaki does not disclose all of the claimed elements and features of these claims. Accordingly, Applicant asks the Office to withdraw its rejection of these claims.

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Claims 10-15

These claims ultimately depend upon independent claim 9. As discussed above, claim 9 is allowable.

In addition to its own merits, each of these dependent claims is allowable for the same reasons that its base claim is allowable. Applicant submits that the Office withdraw the rejection of each of these dependent claims because its base claim is allowable.

Claim 26

This claim recites:

- sending a pair of bandwidth-measurement packets from a sending entity to a receiving entity, wherein a transmission delay between packets in the pair is intolerable;
- immediately thereafter, sending at least one "push" packet to avert a transmission delay between packets in the pair, wherein the delay is caused by packet buffering of a communication device on the network.

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1 In its rejection, Office indicates the following:

2 As to claim 26, Esaki teaches a method for facilitating bandwidth measurement
3 between two entities on a network, the method comprising:

4 sending a pair of bandwidth-measurement packets from a sending entity to a
5 receiving entity, wherein a transmission delay between packets in the pair is intolerable
6 (see col. 3 lines 30-41, packets are sent to input modules where contention is being
7 monitored);

8 immediately thereafter, sending at least one "push" packet to avert a
9 transmission delay between packets in the pair, wherein the delay is caused by packet
10 buffering of a communication device on the network (see col. 3 lines 40-55, when a
11 possible contention is detected, a dummy "push" packet is transmitted).

12
13 Applicant submits that the Esaki does not disclose all of the recited
14 features/elements arranged in the manner recited in this claim.

15 In particular, Esaki does not disclose:

- 16 • "bandwidth-measurement packets"
- 17 • "a transmission delay between packets in the set is intolerable" and
- 18 • "...sending at least one 'push' packet to avert a transmission
19 delay..."
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Bandwidth-Measurement Packets

Applicant submits that **Esaki** never measures bandwidth; therefore, it cannot send "bandwidth-measurement packets." If **Esaki** does disclose bandwidth measurement, Applicant asks the Office to identify, with particularity, where it discloses such functionality.

Therefore, Applicant submits that **Esaki** does not disclose "sending a pair of bandwidth-measurement packets from a sending entity to a receiving entity," as recited in this claim.

Intolerable Transmission Delay

Esaki never even measures any transmission delay between packets. Without taking such a measurement, Applicant submits that **Esaki** cannot make a determination whether such a delay would be "intolerable." Therefore, Applicant submits that **Esaki** does not disclose "a transmission delay between packets in the set is intolerable," as recited in this claim.

Push Packet to Avert a Transmission Delay

The Office equates the "dummy packets" of **Esaki** with the "push" packets recited in this claim. The recited push packet is sent in order to "avert a transmission delay." However, the dummy packets do the opposite. Applicant submits that dummy packets *cause* transmission delays rather than *avert* them. See col. 3, lines 48-50.

As shown above, **Esaki** does not disclose all of the claimed elements and features of the claim. Accordingly, Applicant asks the Office to withdraw its rejection of this claim.

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Claim 27

This claim ultimately depends upon independent claim 26. As discussed above, claim 26 is allowable.

In addition to its own merits, this dependent claim is allowable for the same reasons that its base claim is allowable. Applicant submits that the Office withdraw the rejection of this dependent claim because its base claim is allowable.

Claim 37

On page 2 of the Action, the Office includes this claim in the list of those claims rejected under §102. However, the Office does not call out this claim individually. The Office does not provide any specific reason for its anticipation rejection of this claim.

If this rejection was intentional, Applicant asks the Office to provide specific reasons and objective evidence for such rejection. If this rejection was not intentional, then Applicant asks the Office the explicitly withdraw the rejection.

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Obviousness Rejections

Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)

Applicant disagrees with the Office's obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that all of the criteria set forth for making a *prima facie* case have not been met.

Based upon Esaki and Computer Dictionary

The Office rejects claim 12 under USC § 103(a) as being unpatentable over Esaki and the Computer Dictionary. Applicant respectfully traverses the rejections of these claims. Applicant asks the Office to withdraw its rejection of these claims.

This claim ultimately depends upon independent claim 9. As discussed above, claim 9 is allowable. Accordingly, Applicant asks the Office to withdraw its rejection of this claim.

Based upon Esaki and Gunningberg

The Office rejects claims 10, 11, 13-15, 27, and 37 under USC § 103(a) as being unpatentable over Esaki and Gunningberg. Applicant respectfully traverses the rejections of these claims. Applicant asks the Office to withdraw its rejection of these claims.

Claims 10, 11 and 13-15 ultimately depend upon independent claim 9 and claim 27 ultimately depends upon independent claim 26. As discussed above, claims 9 and 26 are allowable. Accordingly, Applicant asks the Office to withdraw its rejection of these claims.

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Dependent Claims

In addition to its own merits, each dependent claim is allowable for the same reasons that its base claim is allowable. Applicant submits that the Office withdraw the rejection of each dependent claim where its base claim is allowable.

Conclusion

All pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the Office is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

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